Date: Fri, 22 Jan 93 20:10:16 PST
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #98
To: Info-Hams

Info-Hams Digest Fri, 22 Jan 93 Volume 93 : Issue 98

Today's Topics:

BULLETIN: Dynamic Auroral Oval Simulation Software Update
Consider this about
Gel Cells
illegals (was: Re: Radio Shack Business Band Radio)
License Delays
Marge Simpson's sister is a ham!
Meteor Scatter CQ W3OTC (Was Re: Radio/Satellite Tracking)
Meteors de W3OTC
Real hams?
Sending email from Internet to packet???
The 220 MHz debacle.

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 22 Jan 93 22:37:33 GMT
From: news-mail-gateway@ucsd.edu
Subject: BULLETIN: Dynamic Auroral Oval Simulation Software Update
To: info-hams@ucsd.edu

****
** SOFTWARE RELEASE ANNOUNCEMENT **
****

-- NEW SPRING SPECIAL RATES ON THE AURORA SIMULATION SOFTWARE --
-- ALL HAM OPERATORS WITH VALID CALL-SIGNS NOW QUALIFY FOR DISCOUNTS --

The Solar Terrestrial Dispatch is pleased to announce the release of an Auroral Activity Predictions and Dynamic Auroral Oval Simulator software package. This software has been well over a year in development.

With this software you can:

- Determine whether aurorae might be observed from your location.
- Determine the potential magnitude of auroral activity.
- See whether HF radio signal paths cross into the auroral zone where significant signal degradation occurs.
- Superimpose any number of great circle paths on the maps.
- Determine the best azimuth for radio transmissions to avoid the instabilities of the auroral zone.
- Graphically draw the position of both the northern and southern auroral ovals with estimated contours illustrating what areas of the Earth are most likely to observe low, moderate and/or high levels of auroral activity.
- Determine where aurorae can be observed directly overhead.
- Learn the behavior of the auroral oval.
- Predict possible levels of auroral activity in the future, and determine whether the future activity may be observed from your location.
- Determine the equatorward expansion of the auroral oval and how it might affect radio signal paths or auroral visibility.
- Simulate the visibility of auroral activity from any ground-level location on the Earth, and for any date and any time.
- Determine the characteristics, location, and magnitude of auroral activity for almost any historic period of time or any predicted time in the future.
- Plot the locations (ground-stations) where aurorae were sighted for any date from September 1991 to the present, including the major auroral storm period of late March of 1991.
- Superimpose any number of great circle paths on the maps the software produces to visually determine their proximity to the auroral oval for any date and any time (highly valuable for HAM operators seeking the best possible radio signal paths).
- Superimpose on any of the maps the sunrise/sunset grayline terminator.
- Much More . . .

This software is based on scientific models, yet does not require any technical knowledge or education to operate. It is ideal for students, teachers, amateur and/or professional astronomers, amateur and/or professional radio operators, the media, and any other individual or group of individuals interested in predicting, observing, or analyzing auroral activity.

It requires an IBM or compatible MSDOS computer system with at least

256K of memory and VGA graphics capabilities. The software will use (and benefit from) a math coprocessor if your system is so equipped.

Pricing information follows below. Note that all prices are in either Canadian OR U.S. funds. U.S. cheques or money orders are accepted:

Spring Special Price:	$129.95	<-- Regular price is $149.95.
Amateur Astronomy or HAM Ops. :	$ 99.95	<-- 23 % discount (see below)
Education/Internet Special:	$ 94.95	<-- 27 % discount (see below)
Persons Registered with the STD:	$ 64.95	<-- 50 % discount (see below)

(SPECIFY WHETHER YOUR REQUIRE 5.25" OR 3.5" HIGH-DENSITY DISKS)
(Canadian Residents please account for GST)
(All customers add $5.00 dollars for S/H)
(Please allow 2 to 5 weeks for delivery)

(ACT NOW WHILE THE INTRODUCTORY PRICES STILL APPLY)

Remit all cheques or money orders to the "Solar Terrestrial Dispatch" at the following address:

Solar Terrestrial Dispatch
P.O. Box 357
Stirling, Alberta, Canada
T0K 2E0

People registered with us and seeking the 50% discount price must include their valid registration number with their order. If you have lost your registration number, contact us at: (403) 756-2386.

The "Education/Internet Special" only applies to teachers of High Schools, Colleges or Universities, OR to those who have valid electronic INTERNET e-mail addresses. If you are an educator, you must include your educational institutions name and a phone number at that institution where you can be reached. For those who have valid INTERNET e-mail addresses, state your e-mail address(es) to qualify for this 27% discount.

If you are a member of a local Amateur Astronomy Club or Amateur Radio Club, OR, if you have a valid amateur radio license, you qualify for the 23% discount. Simply include the name and address (or a phone number for confirmation if an address does not exist) to your club, or your amateur radio call-sign to qualify for this discount. Bulk purchases of the software by Clubs for their members is also possible. Call us for details at (403) 756-2386.

All others who do not fall into one of the above categories must pay the Spring Special rate of $129.95 in either Canadian or U.S. funds.

All persons who purchase this software are automatically registered with us and therefore qualify for all significant discounts on future software releases or revisions for as long as their registrations remain valid.

Prices are subject to change without notice. These Spring Special rates will expire on 31 May, 1993.

** End of Bulletin **

Date: 21 Jan 93 14:54:02
From: news.claremont.edu!ucivax!ofa123!Larry.Mc.Donald@uunet.uu.net
Subject: Consider this about
To: info-hams@ucsd.edu

rossi@gvlf9-q.gvl.unisys.com

(Pete Rossi)
> I was talking to a friend recently about the benefits of a hard
> mounted roof antenna. He was very much opposed to the idea of drilling
> a hole in the roof of his new car. His main concern was " reduction in
> value ".

A local t-hunter here had a Nissan Pathfinder (?) that he went to trade in. It had a fairly huge hole in it's roof, so he told the dealer about it. Their response? "So?"

... Larry.Mc.Donald, N6ZMB, Fullerton, California! <cough, cough>
___ Blue Wave/QWK v2.10

--- Maximus 2.01wb

Date: 23 Jan 93 01:18:41 GMT
From: usc!news.bbn.com!olivea!sgigate!sgiblab!zaphod.mps.ohio-state.edu!malgudi.oar.net!caen!destroyer!ncar!mimbres.cs.unm.edu!constellation!alliant.backbone.uoknor.edu!jlevit@network.UCSD.EDU
Subject: Gel Cells
To: info-hams@ucsd.edu

I've got a quick question. I would like to find a Gel Cell to power my 40W amplifier and HT *at the same time* (5W on the HT), but I'm having trouble finding one. Does anyone know where I can get a

resonably priced and decent Gel Cell which would perform to my
specifications? My amplifier is a car amp, so I'd also like it to be
able to connect to the Gel Cell without a lot of re-wiring....

Thanks for any answers!

Jason Levit

--

--
Jason John Levit   Undergraduate Research,
     N9MLA   Center for Analysis and Prediction of Storms
University of Oklahoma   jlevit@alliant.backbone.uoknor.edu
Meteorology Major   jlevit@geoblue.gcn.uoknor.edu

Date: Sat, 23 Jan 1993 00:35:48 GMT
From: usc!zaphod.mps.ohio-state.edu!caen!destroyer!fmsrl7!lynx.unm.edu!nmsu.edu!
opus!forozco@network.UCSD.EDU
Subject: illegals (was: Re: Radio Shack Business Band Radio)
To: info-hams@ucsd.edu

Here is my story about Radio Shack and their 2m rig:

One day i went to get a serial port adapter for my computer, and when
i was waiting for the guy to go get it from the back of the store, I
asked the other employee to let me see the 2 meter rig. He quickly
took it out of the counter and handed it to me, without an antenna.
Then, I said something like "Can I have the Antenna for the radio, I
would like to see how the transmitter works". I was really suprised
when the guy gave me the antenna and got the radio all set for me to
transmit!! I did make one or two qso's on the local repeater (yes, I
do have a license) and after the other guy came back with my
adaptor, i returned the rig and told the guy something like "By the
way, here is a copy of my ham radio license". Again, I was really
surprised when the guy said "OK, but I don't really need to see that"!
I don't think it's right to let anyone who comes into the store use a
2m rig (or any ham radio transmitter) just because he asks for it. I
think that if someone wants to try out a rig, the Radio Shack people
should at least request a copy of the ham radio license.

73's de Luis

*******my opinions only********
--

Luis F. Orozco
forozco@dante.nmsu.edu
forozco@freedom.nmsu.edu

N 5 U H B
g o o
l m y
y e

Date: 22 Jan 1993 23:06:34 GMT
From: usc!howland.reston.ans.net!bogus.sura.net!darwin.sura.net!mojo.eng.umd.edu!chuck@network.UCSD.EDU
Subject: License Delays
To: info-hams@ucsd.edu

In article <1993Jan22.173243.3401@netcom.com> mont@netcom.com (Mont Pierce) writes:
>If things keep going the way they are, something is bound to happen.
>
>Waiting 2-3 months for an upgrade is not a big problem, since we
>have the /kt /ag /aa /ae suffixes for use during this period.
>
>Waiting 2-3 months for your FIRST license seems outrages. I guess I
>just missed the floodgates, got mine in 5/92 after only waiting 5 weeks.
>I cannot imagine having to wait 2-3 months.

I got mine in 1973. Back then, the FCC regional offices did the testing, and the FCC in Gettysburg issued the licenses. I took the test in June '73, and received my ticket in August '73. That seems to me like 2-3 months! If anything, things now are terrific compared to what we used to get... And I had to pay for my ticket too. (Aarg! Has it really been 20 years?)

>Another thought. If they eliminate 2 of the license classes, won't that
>eliminate 2/5ths (or more) of the work for FCC?? How about this:

No, because the VEC's are doing all of this work. All the FCC sees is the final application for the license class.

>What do you think can be done to improve FCC's licensing process?

Use an IBM/PC and a competently written database program.

Urge new licensee's to try and be patient... It will come.... And it will be worth the wait!

73,

Chuck Harris - WA3UQV
chuck@eng.umd.edu

Date: Sat, 23 Jan 1993 00:05:50 GMT
From: news.tek.com!tvnews!johnr@uunet.uu.net
Subject: Marge Simpson's sister is a ham!
To: info-hams@ucsd.edu

In article <1993Jan22.180203.18690@adobe.com> swirsky@adobe.com (Robert Swirsky) writes:
>
>The only other Ham Radio reference I've ever seen on a television sitcom was
>an episode of Hazel. It went like this:

(sitcom plot deleted)

>Robert A. Swirsky AF2M
>"Another EXTRA for NO-CODE!"

My favorite Ham Radio references were on the "It's Gary Shandling's Show" series. There's a scene where he's on the roof of his condo next to a *huge* tower talking to his (platonic) girlfriend, Nancy. Gary says,

"You girls don't understand anything technical; you probably think an SB-220 puts out 2KW".

There was also a line in another episode where he looks into the camera with a bored expression and says something like, "I could be home working JA's on 10 meters."

John Reynolds NZ7J
Tektronix TV Division
Beaverton, OR

Date: Sat, 23 Jan 1993 01:01:17 GMT
From: usc!cs.utexas.edu!swrinde!emory!wa4mei.atl.ga.us!ke4zv!gary@network.UCSD.EDU
Subject: Meteor Scatter CQ W3OTC (Was Re: Radio/Satellite Tracking)
To: info-hams@ucsd.edu

In article <1993Jan22.060505.7893@ssc.com> markz@ssc.com (Mark Zenier) writes:
>
>One idea I had was to site the master station in the area that uses
>TV channel 2 and use the video carrier for the beacon. Don't they

>offset adjacent stations by 10 kHz on each channel so you could
>monitor with a narrow band receiver.

They only require offset on short spaced stations, less than 175 mile
separation.

Gary

--
Gary Coffman KE4ZV | You make it, | gatech!wa4mei!ke4zv!gary
Destructive Testing Systems | we break it. | uunet!rsiatl!ke4zv!gary
534 Shannon Way | Guaranteed! | emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244 | |

Date: 23 Jan 93 01:16:54 GMT
From: news-mail-gateway@ucsd.edu
Subject: Meteors de W3OTC
To: info-hams@ucsd.edu

I'm happy to see a renewed interst in (at least discussion of) meteor-burst communication. As someone may have noted, I was the other end of the contacts with Ralph Wallio, W0RPK, a few years ago. We used 6 meters, 4 to 6 element beams and 150-250 W output... but also the worst possible modulation scheme, packetizing, etc, AX.25. AFSK-FM gives you a huge performance hit to start with, and the AX.25 scheme doesn't play well with short bursts. Some of the PSK or QPSK modulation schemes would be a much better start. I haven't followed AMTOR, but some approach that doesn't require whole, long packets to be perfect would be a big improvement over AX.25 . Some FEC might be a help.

One of the problems is that at least one of the stations in the QSO has to transmit ALL THE TIME, to probe for trails. The correlation distance is such that you wouldn't do well using a TV transmitter some thousands of meters away to do the probing for you, not at least on the underdense bursts. On the other hand, in the meteor burst (MB) system I did at NBS (now NIST) back in the late 1950s, most of the data was transfered on the overdense (long) bursts. They are quite rare in the afternoon and evening. One or two big ones an hour at 40 MHz, in the doldrums.

Another problem with old-type protocols, is that the transmitter probably doesn't send any info until it has been notified by the other end that the path exists. This means a round-trip prop time (6 ms for 1000 km path), plus the startup/decision time of the remote station, etc. This eats a big hole out of your garden-variety 100 ms burst. For the DX-hunters' mode, you'd continuously send the info blind during the probing for a trail - as in EME, since it is a short message, and wait for a return msg including an ACK and the other station's info. I assume the snow-depth and truck-locator people

use some scheme like this. They don't have to transfer much info.
Even for "serious" message traffic this might be a good way, using short message units and selective ACKs and repeats. Number each short message block and send 100 ms of them as the probe. As ACKs for individual blocks come in, replace them with not-yet-ACKed blocks. On an overdense burst the ACKs should come back soon enough to allow continuous transmission. Just a thought.

As for bands. Both my ham and NBS work has been in the 40-50 MHz range. Why? Meteor sigs and durations decline as the many'th power of the frequency. It's HARD on two meters, but people do it because of the dearth of other modes. Why not use ten meters? You could, except that other modes of prop may obscure the MB sigs and bring you lots of cochannel QRM. Now that we are going toward a sunspot min, 10 is becoming like 6 was in the best DX years, and would be good choice for easy MB. You have to be able to handle continuous strong prop like Es, of course.
Since the meteor trails are at about the same height as Es, Es can give really strong continuous sigs over the same paths.

Since computers hardly existed at the time of my MB work at NBS, we had to use fast-start, fast-stop mag tape machines for transmitting and receiving buffers. Oh for even a Z-80, back then!!

As a final item, MB didn't make it for communication to polar regions, etc where the need existed way-back-then. A similar transmitter power, but with HUGE antennas, would get you well into ionospheric scatter capability, where sigs exist all the time, but weakly. And, for the period before widely-available computers for logic and storage, much simpler and cheaper and more reliable terminal eqpt (remember it was all tubes back then). Hams on 6 still use ionoscatter - listen around 50.125 any weekend morning for weak fluttery SSB phone sigs from 1000 km + - away. The terminology ionospheric scatter vs. meteor scatter to describe this continuous weak propagation shows political orientation. The NBS line at the time was that it arose from turbulence, etc., in the D/E layer. The Stanford line was that it was caused by lots of very small meteors. But maybe the meteors caused the turbulence?? ALASCOM, the Alaskan phone system, uses "MB" equipment, though I would call it ionoscatter.

Of the main NBS people on the first IEEE IONOscatter paper, Ross Bateman, W4AO is dead, Dick Kirby, W0LCT (one of my bosses on the MB work) is president of ITU in Geneva, and I've lost track of Dana Bailey, no call. Earlier NBS people in the meteor business were Franklin Montgomery, W3FQB, Peter Sulzer, x-W3HFW, and George Sugar, x-W3KQS -never on the air. You San Diego folks may know my boss during most of the MB work, Ken Bowles, x-W0???, also of UCSD Pascal fame.

73, Bob W3OTC (now mostly retired from NIST)

ps - I'll be away a couple of weeks.

Date: 22 Jan 93 16:54:16 GMT
From: usc!zaphod.mps.ohio-state.edu!rpi!uwm.edu!biosci!parc!rocksanne!kzin!
hdavies@network.UCSD.EDU
Subject: Real hams?
To: info-hams@ucsd.edu

In article 12164@bongo.tele.com, julian@bongo.tele.com (Julian Macassey) writes:
>In article <1993Jan21.141435.11243@spectrum.xerox.com> hdavies@rx.xerox.com
writes:
>>In article aa06911@ingate.microsoft.COM, a-kevinp@microsoft.COM (Kevin Purcell,
Rho) writes:
>>>What is with these insults. I've been licensed as G8UDP for 13 years.
>>>
>>>72/73 Kevin, N7WIM / G8UDP
>>[snip]
>>
>>Yeah, but that isn't a *real* license! :o)
>>Regards,
>>Hugh, G0CNR.
>
>   Whaddya mean not real? Them G0,4,3 thingies cost the same per
>year as the G8 ones. When I consider my air time as G8LUK, it must
>work out at about 45 quid an hour. Cell phone air time is probably
>cheaper. Last time I was in the UK - just for 6 hours - I didn't raise
>anyone.

Next time I'd be happy to arrange a sked.

BTW, last time I was in LA, the repeaters sounded just as evil as the London
ones. Some things don't change no matter where you are, huh?

>
>   But, my G8 was much harder than my N6. This does not take into
>account the U.S. Morris test.

I might get around to the US exam one day, but when the reciprocal license
is free and grants Extra privileges (OK, not really, but no-one enforces the
differences), why bother?

Regards,

Hugh.

I don't speak for Xerox. | It's no use being clever - we are all
Rank Xerox Centre, UK. | clever here; just try to be kind - a
Huge.wgc1@rx.xerox.com | little kind. (F.J. Foakes Jackson)

Date: Fri, 22 Jan 1993 23:14:10 GMT
From: boulder!ucsu!ucsu.Colorado.EDU!larsent@uunet.uu.net
Subject: Sending email from Internet to packet???
To: info-hams@ucsd.edu

Hi.
Could somebody tell me if it is possible to send mail from Internet
to the Ham radio packet BBS system?
I'm in Colorado and would like to send mail to somebody in California.
Which gateways are there, and which should I be using, and how is the
To: format?

Thanxs!

larsent@ucsu.colorado.edu

Date: 22 Jan 1993 23:36:30 GMT
From: usc!howland.reston.ans.net!bogus.sura.net!darwin.sura.net!
blackhole.delmarva.com!mercury!scoggin@network.UCSD.EDU
Subject: The 220 MHz debacle.
To: info-hams@ucsd.edu

In article 1034@arrl.org, jbloom@arrl.org (Jon Bloom) writes:
> In rec.radio.amateur.misc, bob@kc2wz.bubble.org (Bob Billson) writes:
> >MUSCHINSKE%39A.DEcnet@scfb.chinalake.navy.mil (39A::MUSCHINSKE) says:
> >>And to think the FCC didn't have a plan when it took away 220-222 MHz ;-(!
> >
> >We hams didn't have much of a plan either or we would not have lost it. Use
> >it or lose it! With the recent thread on 70 cm close repeaters in mind how
> >many of us are watching out for our microwave bands? I hope we don't expect
> >the ARRL to come to our rescue. No slight of the ARRL intended here. Seems
> >too many hams have the attitude that "the League will save it for us" instead
> >adding our voices to the Leagues. Bet the FCC got more comments about the
> >no code proposal than the lose to 220-222. <sigh>
>
> (Speaking for myself, *not* the League) my impression is that the
> problem was not lack of response by amateurs--individually or via
> the ARRL. Rather, the reallocation was a "done deal" right from

> the start, and nothing we could have done short of getting a
> Congressional or judicial override would have changed the FCC's
> mind.
>
> The comedy of errors that has resulted from the attempts to put 220-222
> into land mobile service are an embarrasment to the FCC, in my opinion.
> -------
> Jon Bloom, KE3Z | jbloom@arrl.org
> American Radio Relay League | Justice is being allowed to do whatever
> 225 Main St. | I like. Injustice is whatever prevents
> Newington, CT 06111 | my doing so. -- Samuel Johnson

You are probably quite correct - the FCC has as much as said that spectrum is up for sale to the highest bidder. Public welfare, convenience, and necessity which were supposed to be the guiding rules have fallen by the wayside. The special interest groups involved did a good lobbying job and got the spectrum. Then they couldn't agree on how to use it.

If we had some really sharp folks running the FCC, they would take the spectrum back
and place it in a pool for later use. I suspect that the spectrum was under-utilized,
but I agree that due process took a pretty good beating on this one...

Just my opinion.

     - John

+---+
| John K. Scoggin, Jr.   Email: scoggin@delmarva.com |
| Supervisor, Network Operations   Phone: (302) 451-5200 |
| Delmarva Power & Light Company   Fax: (302) 451-5321 |
| 500 N. Wakefield Drive   NOC: (800) 388-7076 |
| Newark, DE 19714-6066 |
| The opinions expressed are not those of Delmarva Power, simply the |
| product of an over-active imagination... |
+---+

Date: Sat, 23 Jan 1993 01:17:04 GMT
From: usc!cs.utexas.edu!swrinde!emory!wa4mei.atl.ga.us!ke4zv!gary@network.UCSD.EDU
To: info-hams@ucsd.edu

References <1993Jan21.152449.5163@mixcom.com>,
<1993Jan21.212752.299@nntpd2.cxo.dec.com>, <1993Jan22.104941.26862@usl.edu>#
Reply-To : gary@ke4zv.UUCP (Gary Coffman)

Subject : Re: Through-the-glass antennas

In article <1993Jan22.104941.26862@usl.edu> jab0684@usl.edu (Boudreaux Jean A) writes:
>Speaking of Larsen antennas, I was the proud owner of a larsen KG 2/70
>on glass dual bander. After carefully cleaning my outside glass, and
>mounting the whip. I was impressed with it's performance, repeater's I
>couldn't hit with 5 watts out of my ht's rubber duck, were fully quieted
>with only 220 milliwats. I gave the antenna all day to sit/set before
>driving off. Well my love affair was very short lived. After
>driving about 1 minute at just under 60 mph., the whip promptly flew
>off of the car and with a clang apparently bounced into a large
>ditch, covered with 2 foot weeds and night. Now this antenna was bought
>from a friend who never used it, after he called the supplier they
>wouldn't refund cause it had been too long since purchase.
>Larsen would not help, they say no one else has had this problem.
>But as post 30627 shows, they are LYING. I recommend avoiding this antenna
>and all other Larsen on glass products, because if it fails they will
>probably stick you as well.

While I generally consider on glass antennas deficient performers at VHF, *anything* is better than a rubber dummy load used inside a metal car. You *can* make them stick for at least a few months. The glue process is the same as that used to attach rear view mirrors. When they tell you *clean* the glass, they *mean* clean the glass. An initital cleaning with an ammonia based solvent should be followed by another cleaning with an alcohol based solvent. That *must* be followed by another cleaning with an acetone or xylene solvent to remove cleaner residue. Then follow the gluing instructions *exactly*. Too much glue is as bad as too little, waiting too long is as bad as not waiting the required time, etc. Since Larsen can't control how you cleaned the glass, or how you apply the glue, I can understand why they would refuse to give a refund.

Note that in hot climates it's not unusual to come back to your sealed car in a parking lot and find the rear view mirror lying on the floorboards. This glue process is not foolproof even when done by factory techs. It's just another of the miseries associated with reluctance to drill holes.

Gary
--

Gary Coffman KE4ZV | You make it, | gatech!wa4mei!ke4zv!gary
Destructive Testing Systems | we break it. | uunet!rsiatl!ke4zv!gary
534 Shannon Way | Guaranteed! | emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244 | |

End of Info-Hams Digest V93 #98
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